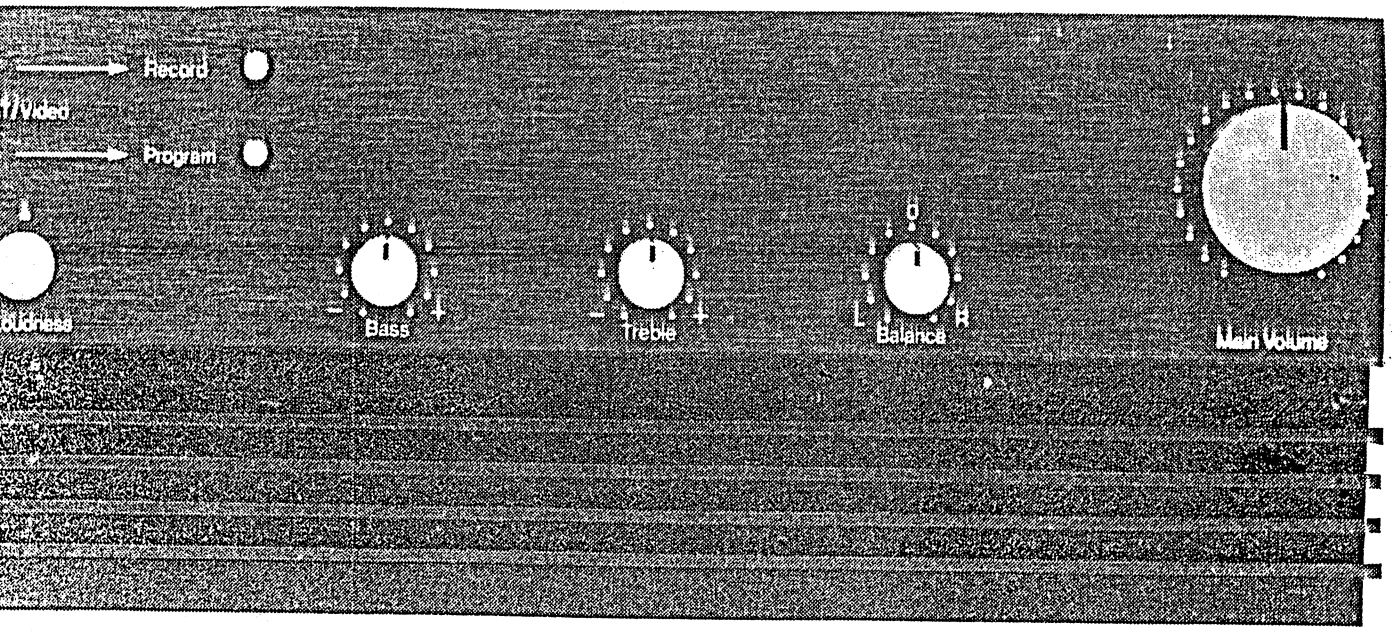
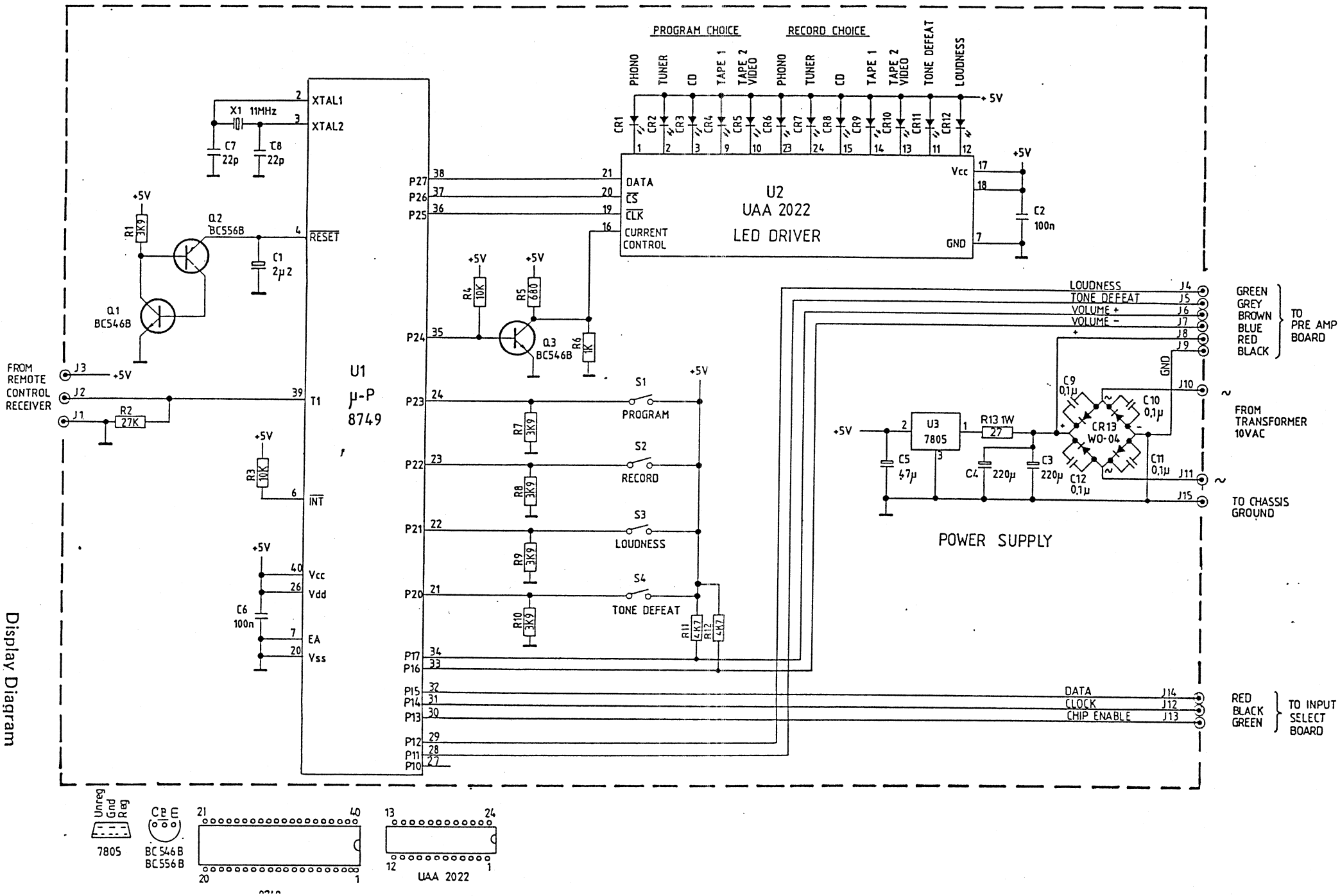
TANDBERG® TIA 3032 A

Circuit Diagrams and Alignment Instructions





Display Diagram

Technical Data

Tandberg Integrated

Amplifier TIR 3032 A

Power requirements:	110-115 V/220-230 V/240 V ± 10%, 50/60 Hz
Power consumption	60 — 500 W
Dimensions:	Width 435 mm Height 137 mm Depth 354 mm Weight 12 kg

AMPLIFIER

Technical data according to IHF-A-202, 1978

Continuous Average Power Output:	(8 ohm,20-20.000 Hz,THD<0.09%) 2 x 100 W
	(4 ohm,20-20.000 Hz,THD<0.09%) 2 x 120 W
Wideband damping factor:	>800
Frequency response:	
Linear inputs	5-100.00 Hz ±0/-3 dB
Phono MC and MM inputs	20-20.000 Hz ±0.5 dB
Sensitivity	
Phono MC	15µ V
Phono MM	160µ V
FM,Tape 1,Tape 2,Video,Aux,CD	15µV
A-weighted Signal-to-noise ratio:	
Phono MC	68 dB
Phono MM	72 dB
FM,Tape 1,Tape 2,CD	74 dB
Maximum input signal: Phono MC	5.0 mV
Phono MM	70 mV
FM.Tape 1/2,CD,Video,DAT,Aux	3.5 V
Input Impedance:	
Phono MC	150 ohm
Phono MM	47 kohm
FM,Tape 1/2,CD.Video,DAT,AUX	10 kohm

Specifications are subject to change without notice

Secondary Disclosures

Output impedance:	
Power Amplifier	0,01 ohm
Headphones	2,70 ohm
Headphones (min.load)	8 ohm
Tone-control response:	
Bass	±9 dB at 100 Hz
Treble	±9 dB at 10.000 Hz
Loudness	Max. 7 dB at 50
Crosstalk (100 Hz - 10 kHz):	
Phono MM, Phono MC	>70 dB
Tape 1,Tape 2,DAT,Video,Tuner,CD	>70 dB
Separation (100 Hz - 10 kHz):	
Phono MM, Phono MC	>45 dB
Tape 1,Tape 2,DAT,Video,Tuner,CD	>45 dB
Transient intermodulation:	
All inputs:	Immeasureable

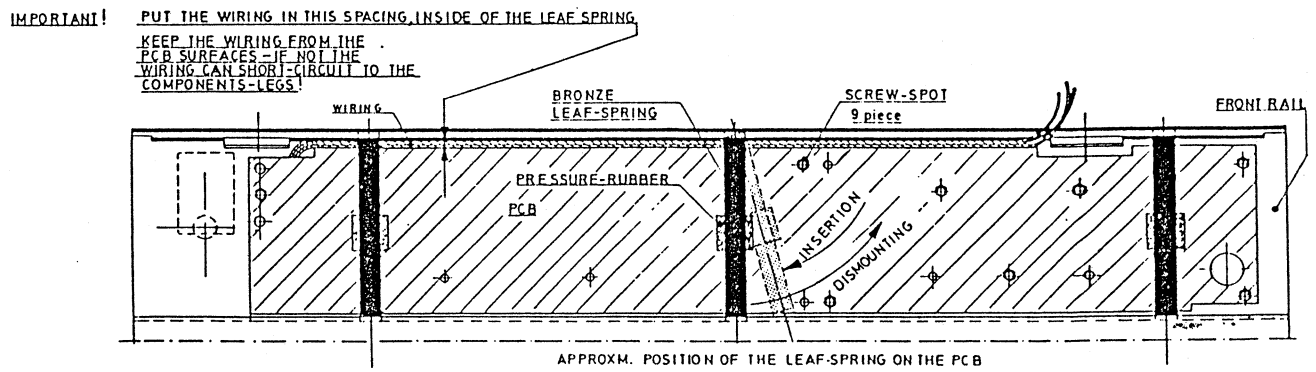
Other Technical Data

Frequency range:	
Tape 1,Tape 2,Tuner,CD	1.6 - 250.000 Hz +0/-3 dB
Phase Shift (20 Hz - 20.000 Hz):	
Tape 1,Tape 2,DAT,Video,Tuner,CD	+5°/—5°

Specifications are subject to change without notice

Dismantling/Mounting the Display board

Dismantling/mounting the Display board is in principle shown in the figure. (The dimensions are not the same).


IMPORTANT!
PUT THE WIRING IN THIS SPACING, INSIDE OF THE LEAF SPRING
KEEP THE WIRING FROM THE PCB SURFACES - IF NOT THE WIRING CAN SHORT-CIRCUIT TO THE COMPONENTS-LEGS!
WIRING
BRONZE LEAF-SPRING
SCREW-SPOT 9 piece
FRONT RAIL
PRESSURE-RUBBER
PCB
INSERTION
DISMOUNTING
APPROXM. POSITION OF THE LEAF-SPRING ON THE PCB

5mV AC VOLTAGES.
AC VOLTAGES ARE APPROXIMATE VALUES.
VOLUME IN MAX POSITION BALANCE IN MIDLE POSITION

5V DC VOLTAGES.
MC INPUT AND ALL HIGH LEVEL INPUTS LOADED WITH 100Ω AND 9kΩ RESPECTIVELY.
ALL DC VOLTAGES ARE TYPICAL VALUES

ALL TRANSISTORS AND IC'S:BOTTOM VIEW

BC447B BC485B BC546B BC556B — C B E / E B C — BC635S — LF 353 — MC 14051B MC 14053B MC 14094B — reg. 0V unreg. MC7815 CP — reg un- 0V reg MC7915CP

PRE AMPLIFER BOARD 47364

RIAA AMPLIFIER L.CH.

LINE AMPLIFIER L.CH.

TONE CONTROL L.CH.

RIAA AMPLIFIER R.CH.

LINE AMPLIFIER R.CH.

TONE CONTROL R.CH.

2/3 U108 MC 14053B

J112 P112 BASS TREBLE

J107 P107 L GND R — TO POWER AMP BOARD

J212 P212 BASS TREBLE

MM/MC INPUT BOARD 47358

MULTI INPUT BOARD 1 47376

MULTI INPUT BOARD 2 47376

INPUT SELECT L & R CH.

POWER SUPPLY

MOTOR CONTROL

FROM MAINS Grd TRANSFORMER

TO BALANCE POTMETER — FROM VOLUME POTMETER — FROM DISPLAY BOARD — FROM DISPLAY BOARD — TO MOTOR POTMETER

ADJUSTMENTS:
Adjustments can first be performed after 10 minutes warmup.
Adjust R109/R209 until the DC-voltage at TP101/TP201 is 0V±100mV.
Short circuit connectors shall be used at the MC-inputs.

Preamplifier 2 Diagram

LEFT CHANNEL

RIGHT CHANNEL

THERMIC SERVO

THERMIC SERVO

RELAY CONTROL

MAINS TRANSFORMER

T1

MAINS TRANSFORMER	WIRING	FUSE
220V - 230V	A to 3 4 to 5 B to 6	3,15 A
240V	A to 1 4 to 5 B to 6	3,15 A
110V - 115V	A to 3 and 5 B to 4 and 6	6,3 A

** THE VARISTOR MUST BE CHANGED IF MAINS IS CHANGED

* FUSE-RESISTORS

** After 30 minutes warmup with no load
Adjustable with R539/R639

ADJUSTMENTS

1. Insert shorting plugs in J571 and J671
   Adj. R516/616 to minimum THD measured at the output with 15V rms 1kHz and NO LOAD.
   Max. 0,006% THD
2. Measure DC at the outputs and adjust to less than 20mV DC OFSET with R519/619.
3. Apply 4ω loading of the outputs and adjust to minimum THD at 15V rms 1kHz. 0,01% max
4. Repeat 2. and then remove the shorting plugs in J571 and J671.
5. Check that the OFSET IS WITHIN ± 50mV DC after 5 min.

TRANSISTORS ARE SEEN FROM UNDERNEATH.
UNMARKED DIODES ARE 1N 4148

Power Amplifier Diagram

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NOTE

The information in this manual is subject to changes without notification. Additional pages may be inserted in future editions. The user is asked to excuse any omissions or errors in the present edition.

No responsibility is assumed if accidents occur while the user is following the instructions in this manual. No responsibility is assumed for defects in the unit's firmware.

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